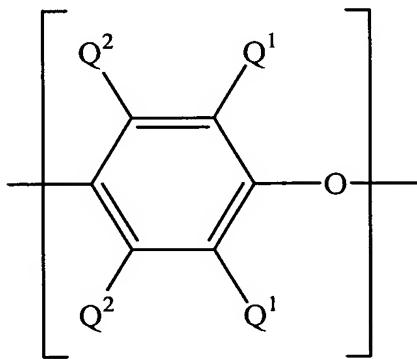


CLAIMS:

1. A method of preparing a thermoplastic composition, comprising:
  - melt-blending
    - a poly(arylene ether),
    - a poly(alkenyl aromatic) resin,
    - a hydrogenated block copolymer of an alkenyl aromatic compound and a conjugated diene, and
    - an unhydrogenated block copolymer of an alkenyl aromatic compound and a conjugated diene
  - to form a first intimate blend; and
    - melt-blending a polyolefin and additional hydrogenated block copolymer with the first intimate blend to form a second intimate blend comprising
      - the first intimate blend,
      - the polyolefin, and
      - the additional hydrogenated block copolymer.
2. The method of Claim 1, wherein melt-blending to form a first intimate blend comprises heating to a temperature of about 80°C to about 400°C.
3. The method of Claim 1, wherein the melt-blending to form a first intimate blend comprises mixing with at least two mixing elements.
4. The method of Claim 1, wherein melt-blending to form a first intimate blend and melt-blending to form a second intimate blend collectively comprise mixing with a mixing energy input of at least about 0.20 kW-hr/kg.

5. The method of Claim 1, wherein the first intimate blend further comprises a polyolefin in an amount not greater than that of the polyolefin added during formation of the second intimate blend.

6. The method of Claim 1, wherein the poly(arylene ether) comprises a plurality of structural units of the formula:



wherein for each structural unit, each  $Q^1$  is independently halogen, primary or secondary C<sub>1</sub>-C<sub>8</sub> alkyl, phenyl, C<sub>1</sub>-C<sub>8</sub> haloalkyl, C<sub>1</sub>-C<sub>8</sub> aminoalkyl, C<sub>1</sub>-C<sub>8</sub> hydrocarbonoxy, or C<sub>2</sub>-C<sub>8</sub> halohydrocarbonoxy wherein at least two carbon atoms separate the halogen and oxygen atoms; and each  $Q^2$  is independently hydrogen, halogen, primary or secondary C<sub>1</sub>-C<sub>8</sub> alkyl, phenyl, C<sub>1</sub>-C<sub>8</sub> haloalkyl, C<sub>1</sub>-C<sub>8</sub> aminoalkyl, C<sub>1</sub>-C<sub>8</sub> hydrocarbonoxy, or C<sub>2</sub>-C<sub>8</sub> halohydrocarbonoxy wherein at least two carbon atoms separate the halogen and oxygen atoms.

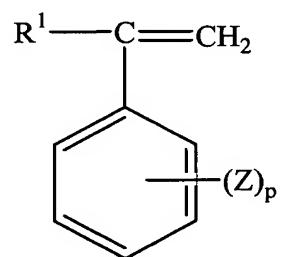
7. The method of Claim 2, wherein each  $Q^1$  is independently C<sub>1</sub>-C<sub>4</sub> alkyl or phenyl, and each  $Q^2$  is independently hydrogen or methyl.

8. The method of Claim 1, wherein the poly(arylene ether) has an intrinsic viscosity of about 0.2 to about 0.6 dL/g as measured in chloroform at 25°C.

9. The method of Claim 1, wherein the poly(arylene ether) comprises a copolymer of 2,6-dimethylphenol and 2,3,6-trimethylphenol.

10. The method of Claim 1, wherein the first intimate blend comprises the poly(arylene ether) in an amount of about 10 to about 59 weight percent, based on the total weight of the composition.

11. The method of Claim 1, wherein the poly(alkenyl aromatic) resin comprises at least 25% by weight of structural units derived from an alkenyl aromatic monomer of the formula



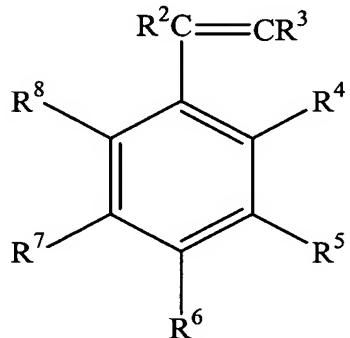
wherein R<sup>1</sup> is hydrogen, C<sub>1</sub>-C<sub>8</sub> alkyl, or halogen; Z is vinyl, halogen, or C<sub>1</sub>-C<sub>8</sub> alkyl; and p is 0 to 5.

12. The method of Claim 1, wherein the poly(alkenyl aromatic) resin comprises at least one poly(alkenyl aromatic) resin selected from the group consisting of atactic homopolystyrene, syndiotactic homopolystyrene, rubber-modified polystyrene, and mixtures comprising at least one of the foregoing poly(alkenyl aromatic) resins.

13. The method of Claim 1, wherein the first intimate blend comprises about 1 to about 46 weight percent poly(alkenyl aromatic) resin, based on the total weight of the composition.

14. The method of Claim 1, wherein the hydrogenated block copolymer comprises:

(A) at least one block derived from an alkenyl aromatic compound having the formula



wherein R<sup>2</sup> and R<sup>3</sup> each represent a hydrogen atom, a C<sub>1</sub>-C<sub>8</sub> alkyl group, or a C<sub>2</sub>-C<sub>8</sub> alkenyl group; R<sup>4</sup> and R<sup>8</sup> each represent a hydrogen atom, a C<sub>1</sub>-C<sub>8</sub> alkyl group, a chlorine atom, or a bromine atom; and R<sup>5</sup>-R<sup>7</sup> each independently represent a hydrogen atom, a C<sub>1</sub>-C<sub>8</sub> alkyl group, or a C<sub>2</sub>-C<sub>8</sub> alkenyl group, or R<sup>4</sup> and R<sup>5</sup> are taken together with the central aromatic ring to form a naphthyl group, or R<sup>5</sup> and R<sup>6</sup> are taken together with the central aromatic ring to form a naphthyl group; and

(B) at least one block derived from a conjugated diene, in which the aliphatic unsaturated group content in the block (B) is reduced by hydrogenation.

15. The method of Claim 1, wherein the hydrogenated block copolymer has an alkenyl aromatic content of about 10 to about 90 weight percent.

16. The method of Claim 1, wherein the hydrogenated block copolymer has an alkenyl aromatic content of about 40 to about 90 weight percent.

17. The method of Claim 1, wherein the hydrogenated block copolymer has an alkenyl aromatic content of about 50 to about 90 weight percent.

18. The thermoplastic composition of Claim 1, wherein the hydrogenated block copolymer comprises a styrene-(ethylene-butylene)-styrene triblock copolymer.

19. The method of Claim 1, wherein the first intimate blend comprises about 1 to about 20 weight percent hydrogenated block copolymer, based on the total weight of the composition.

20. The method of Claim 1, wherein the unhydrogenated block copolymer comprises a styrene-butadiene diblock copolymer or a styrene-butadiene-styrene triblock copolymer.

21. The method of Claim 1, wherein the first intimate blend comprises about 1 to about 20 weight percent of the unhydrogenated block copolymer, based on the total weight of the composition.

22. The method of Claim 1, wherein the polyolefin comprises a homopolymer or copolymer having at least about 80 weight percent of units derived from polymerization of ethylene, propylene, butylene, or a mixture thereof.

23. The method of Claim 1, wherein the polyolefin is a propylene polymer comprising a homopolymer of polypropylene; or a random, graft, or block copolymer of propylene and at least one olefin selected from ethylene and C<sub>4</sub>-C<sub>10</sub> alpha-olefins, with the proviso that the copolymer comprises at least about 80 weight percent of repeating units derived from propylene.

24. The method of Claim 1, wherein the polyolefin comprises a homopolypropylene.

25. The method of Claim 1, wherein the second intimate blend comprises about 10 to about 60 weight percent polyolefin, based on the total weight of the composition.

26. The method of Claim 1, wherein the additional hydrogenated block copolymer used to form the second intimate blend is the same as the hydrogenated block copolymer used to form the first intimate blend.

27. The method of Claim 1, wherein the additional hydrogenated block copolymer used to form the second intimate blend is different from the hydrogenated block copolymer used to form the first intimate blend.

28. The method of Claim 1, wherein the additional hydrogenated block copolymer used to form the second intimate blend is a styrene-(ethylene-butylene)-styrene triblock copolymer having a styrene content of about 50 to about 90 weight percent.

29. The method of Claim 1, wherein the amount of the additional hydrogenated block copolymer is about 1 to about 20 weight percent, based on the total weight of the composition.

30. The method of Claim 1, wherein the first intimate blend and/or the second intimate blend further comprises a polypropylene-polystyrene copolymer selected from the group consisting of graft copolymers, diblock copolymers, multiblock copolymers, radial block copolymers, and combinations comprising at least one of the foregoing polypropylene-polystyrene copolymers.

31. The method of Claim 30, wherein the polypropylene-polystyrene copolymer is a graft copolymer having a propylene polymer backbone and one or more styrene polymer grafts.

32. The method of Claim 31, wherein the polypropylene-polystyrene graft copolymer comprises about 50 to about 85 weight percent of the propylene polymer backbone and about 15 to about 50 weight percent of the styrene polymer grafts.

33. The method of Claim 30, wherein the polypropylene-polystyrene copolymer is present in an amount of about 0.5 to about 30 weight percent, based on the total weight of the composition.

34. The method of Claim 1, wherein the first intimate blend and/or the second intimate blend further comprises an ethylene/alpha-olefin elastomeric copolymer.

35. The method of Claim 34, wherein the ethylene/alpha-olefin elastomeric copolymer is a copolymer of ethylene and at least one C<sub>3</sub>-C<sub>10</sub> alpha-olefin.

36. The method of Claim 34, wherein the ethylene/alpha-olefin elastomeric copolymer is an ethylene-butylene rubber, an ethylene-propylene rubber, or a mixture thereof.

37. The method of Claim 34, wherein the ethylene/alpha-olefin elastomeric copolymer is present in an amount of about 1 to about 20 weight percent, based on the total weight of the composition.

38. The method of Claim 1, wherein the second intimate blend further comprises at least one reinforcing filler.

39. The method of Claim 38, wherein the reinforcing filler is selected from the group consisting of glass fibers, talc, quartz fibers, carbon fibers, potassium titanate fibers, silicon carbide fibers, boron carbide fibers, gypsum fibers, aluminum oxide fibers, iron fibers, nickel fibers, copper fibers, wollastonite fibers, poly(ether ketone) fibers, polyimide benzoxazole fibers, poly(phenylene sulfide) fibers, polyester fibers, aromatic polyamide fibers, aromatic polyimide fibers, aromatic polyetherimide fibers, acrylic fibers, poly(vinyl alcohol) fibers, polytetrafluoroethylene fibers, and combinations comprising at least one of the foregoing reinforcing fillers.

40. The method of Claim 38, wherein the reinforcing filler is glass fibers.

41. The method of Claim 38, wherein the second intimate blend further comprises a graft copolymer comprising a polyolefin backbone and polar grafts formed from one or more cyclic anhydrides.

42. The method of Claim 1, further comprising blending the second intimate blend with at least one reinforcing filler.

43. The method of Claim 1, further comprising blending the second intimate blend with at least one reinforcing filler and a graft copolymer comprising a polyolefin backbone and polar grafts formed from one or more cyclic anhydrides.

44. The method of Claim 1, wherein the first intimate blend and/or the second intimate blend further comprises an additive selected from the group consisting of stabilizers, mold release agents, processing aids, flame retardants, drip retardants, nucleating agents, UV blockers, dyes, pigments, antioxidants, antistatic agents, and combinations comprising at least one of the foregoing additives.

45. A method of preparing a thermoplastic composition, comprising:
  - melt-blending to form a first intimate blend comprising
    - about 10 to about 59 weight percent of a poly(arylene ether);
    - about 1 to about 46 weight percent of a poly(alkenyl aromatic) resin;
    - about 1 to about 20 weight percent of a hydrogenated block copolymer of alkenyl aromatic compound and a conjugated diene; and
    - about 1 to about 20 weight percent of an unhydrogenated block copolymer of an alkenyl aromatic compound and a conjugated diene; and
  - melt-blending about 10 to about 60 weight percent of a polyolefin and about 1 to about 20 weight percent of additional hydrogenated block copolymer with the first intimate blend to form a second intimate blend comprising
    - the first intimate blend,
    - about 10 to about 60 weight percent of the polyolefin, and
    - about 1 to about 20 weight percent of additional hydrogenated block copolymer;
- wherein all weight percents are based on the total weight of the composition.

46. A method of preparing a thermoplastic composition, comprising:

melt-blending to form a first intimate blend comprising

about 10 to about 59 weight percent of a poly(arylene ether) comprising 2,6-dimethyl-1,4-phenylene ether units, 2,3,6-trimethyl-1,4-phenylene ether units, or a combination thereof;

about 1 to about 46 weight percent of polystyrene or rubber-modified polystyrene;

about 1 to about 20 weight percent of a styrene-(ethylene-butylene)-styrene block copolymer having a styrene content of about 50 to about 90 weight percent; and

about 1 to about 20 weight percent of a styrene-butadiene-styrene block copolymer; and

melt-blending about 10 to about 60 weight percent of polypropylene, about 1 to about 20 weight percent of additional styrene-(ethylene-butylene)-styrene block copolymer having a styrene content of about 50 to about 90 weight percent, and about 1 to about 20 weight percent of ethylene-butylene rubber or ethylene-propylene rubber with the first intimate blend to form a second intimate blend comprising

the first intimate blend,

about 10 to about 60 weight percent of the polypropylene,

about 1 to about 20 weight percent of additional styrene-(ethylene-butylene)-styrene block copolymer having a styrene content of about 50 to about 90 weight percent, and

about 1 to about 20 weight percent of ethylene-butylene rubber or ethylene-propylene rubber;

wherein all weight percents are based on the total weight of the composition.